

Longitudinal [18F]FDG PET-MRI at 9.4 Tesla in Twitcher mice using spatial normalization

Tuesday, 22 May 2018 16:15 (1h 30m)

This study presents preliminary results on the feasibility of truly simultaneous PET-MRI in live mice on a conventional 9.4T MRI system retrofitted with a miniature-PET ring. Wild-type and Twitcher mice, a model of Krabbe disease, were anaesthetized and imaged longitudinally at four time points. Simultaneously acquired MRI images allowed the generation of a model-specific brain template for voxel and atlas based analyses of the PET scans. Preliminary findings were in line with previous results from metabolomics suggestive of alterations in brain glucose metabolism in Twitcher mice. A brain region-specific analyses based on segmented MRI scans will allow the quantification and statistical analysis of the glucose uptake.

Primary authors: Prof. SCHWESER, Ferdinand (Buffalo Neuroimaging Analysis Center, University at Buffalo); CHOUDHARY, Poonam (Buffalo Neuroimaging Analysis Center, University at Buffalo)

Co-authors: Mr DHAMANKAR, Akshay (Buffalo Neuroimaging Analysis Center, University at Buffalo); Ms KNAPP, Cheryl (Center for Biomedical Imaging, University at Buffalo); Mr SHIN, Daesung (Hunter James Kelly Research Institute, University at Buffalo); Prof. WRABETZ, Lawrence (Hunter James Kelly Research Institute, University at Buffalo); Ms PREDA, Marilena (Center for Biomedical Imaging, University at Buffalo); Mr WEINSTOCK, Nadav (Hunter James Kelly Research Institute, University at Buffalo); Prof. ZIVADINOV, Robert (Buffalo Neuroimaging Analysis Center, University at Buffalo)

Presenter: CHOUDHARY, Poonam (Buffalo Neuroimaging Analysis Center, University at Buffalo)

Session Classification: Session 8 - Poster Session I

Track Classification: 1 - Instrumentation: detectors and electronics